PANTECH
CDM8635

User Guide

Thank you for choosing the CDM8635, our latest mobile phone. The CDM8635 has many features, such as Clear Hearing, designed to enhance your mobile experience. From its EZ to read menus, to its sleek, stylish design, we know you will enjoy the entire CDM8635 experience.

This User Guide contains important and useful information that will maximize your familiarity with all that the CDM8635 has to offer.

Specifications

Design
Clamshell phone with internal and external displays

Displays
- 260k colors TFT LCD with 2.2″ internal display
- 4 gray STN LCD with 1.5″ external display
- 5 lines for text in basic mode with 22 point font
- Two soft keys and four-way scroll and selection OK keys

Melodies
MP3, PMD, SP-MIDI

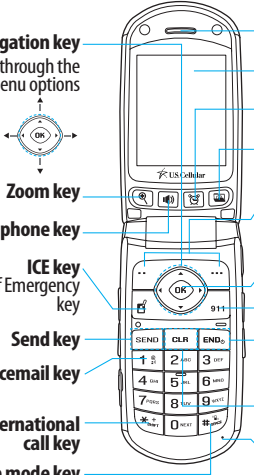
Camera
Integrated SXGA (1.3M) CMOS Camera
- Resolution up to 1280 x 960
- Photo album

Dimensions & Weight
- Weight: 100 g (with standard battery) 3.52 oz
- Dimensions: 98 mm x 50 mm x 20.2 mm
  3.85″X 1.96″X 0.79″

Power Management (Performance)

Battery Type	Capacity	Standby Time	Talk Time
Standard Lithium-Ion (Li-ion)	920 mAh	330 hours	250min

Phone overview



Navigation key
Scroll through the menu options

Zoom key

Speaker phone key

ICE key
In Case of Emergency key

Send key

Voicemail key

Prefix international call key

Vibrate mode key

Earpiece

Internal display

Alarm key

Picture Gallery key

Left/Right Soft key
Perform the functions shown at the bottom line of the display.

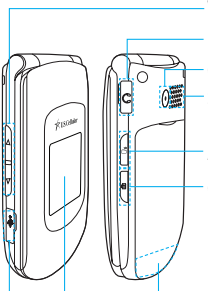
OK key
Press to enter menu system.

911 key

End key
Turns phone on/off, ends calls, exits menus.

Clear key
Returns to previous screen or deletes characters in text mode.

Microphone



Volume key

Headset jack

Camera lens

Speaker

AVR key

Camera key

External display

Internal antenna

Charging connector

note: Holding device at internal antenna area might affect call quality reception.

Menu overview

Contacts
Emergency Contact
Contact List
Add Contact
Edit Contact
Erase Contact
Groups
Speed Dials
My Name & Number

Recent Calls
All Calls
Missed Calls
Dialed Calls
Received Calls
Blocked Calls
Call Timers

Messaging
Create Message
Inbox
Sent
Drafts
Voicemail
Settings

Media Gallery
Picture Gallery
Camera
Sound Gallery

easyedge[sm]
easyedge[sm]

Tools
Alarm Clock
Calculator
Tip Calculator
Calendar
Voice Memo
Stop Watch
World Clock
Notepad

Tone Room
Launching Tone Room

Wizard
Voice Commands
Help Balloon
Clear Hearing

Settings
Sound Settings
Display Settings
Call Settings
Advanced
Phone Info

Setting dependent

Quick & easy

Keys	Functions
[▪▪]/[▪▪▪]	Perform the functions shown at the bottom line of the display by using these soft keys.
	Scroll through the menu options in Menu mode. In Standby mode, Left Scroll: Access **Calendar** menu Right Scroll: Access **Messaging** menu Up Scroll: Access **easy**edge[sm] menu Down Scroll: Access **Calculator** menu
[OK]	Select a menu function or store user-input information, such as names. Also use this key for confirmation as the [OK] key.
[CLR]	Delete characters from the display, or return to previous menu.
[SEND]	Make or receive a call. Show the recent call list in Standby mode.
[END]	Complete the current call. Turn phone on/off if pressed and held. Cancel user input and return to standby mode while in Menu mode.
[1]	Quickly connect to the voicemail server if pressed and held in Standby mode.
[0] ~ [9]	Enters numbers, letters or special characters. Go to the dial screen if pressed in standby mode.
[#]	Enter or exit Vibrate mode if pressed and held in Standby mode. Enter a space in text input mode.

Keys	Functions
0 NEXT	Work in Word Search mode if pressed in the Predictive Text input mode.
* + Prog'y	Enter the + sign prefix for international dialing if pressed and held. Change various text input modes if pressed and held at the text-editing screen.
	Adjust the earpiece volume while making a call. Control the Ringtone volume, Vibrate mode and Silent mode in standby. Mute the ringtone of an incoming call.
	Turn Camera Capture mode on. Work as a camera shutter in Capture mode.
	Access to AVR menu
	Zoom in/out the font when entering
	Turn the Speakerphone mode on/off
	Set the alarm
	Enter to the photo album
	Available to contact most important 3 persons in case of emergency
911	Make a emergency call

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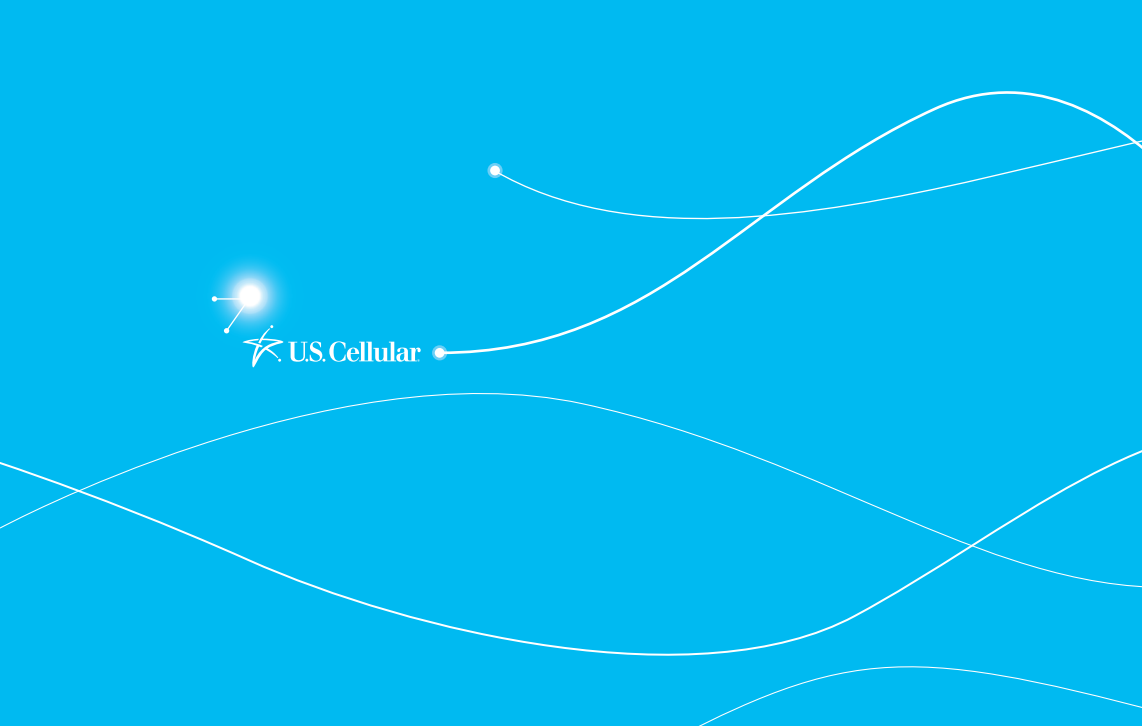
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1

Getting Started

Battery
Turn phone on/off
Language
Essential display indicators
In case of emergency key
Entering text

Battery

About your battery

Your phone uses a Li-Ion battery. Make sure to use an authorized battery and charger only. For more details, please inquire at your nearest dealer.

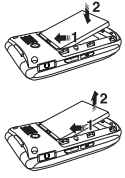
note: Your phone is powered by a Lithium Ion (Li-Ion) battery. This means that, unlike other forms of battery technology, you can recharge your battery while some charge remains without reducing your phone's autonomy due to the "battery memory effect" inherent in those technologies.

Installing/removing battery

1. Remove the battery cover from the unit. Push down and forward. To replace cover, fit on guide rails and push back in place.

2. Put the contacts of the battery into the hole located at the bottom of the unit insert and press the upper side of the battery until you hear the "click". Make sure you align the gold contacts at the battery end with contacts on the phone. If the contacts at the battery are not properly aligned, damage could occur to the phone and the battery.

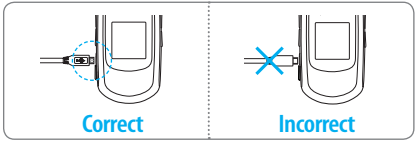
3. To remove the battery, push the battery forward and up (2) and remove (2) the battery.



To charge your battery

1. To charge, open the protective cover on the bottom left side and connect the charger adapter. The arrow on the charger should face the top of the phone.

2. To remove the adapter connection, pull the adapter away.(1).



Turn phone on/off

To turn on

1. Press and hold END.

To turn off

1. Press and hold END.

Language

Setting up

1. Press Menu > Phone Settings > Advanced > Language.
2. Select the language > OK.

Essential display indicators

	Signal strength. The greater the number of bars, the stronger the signal. When network is in searching mode is displayed.
	Flight mode is active (Menu > Settings > Advanced > Airplane Mode)
	A call is being made
	Received text message
	Received text message and voice message
	Received voice message
	An alarm is set
	Set the location mode on
	Set the TTY mode to TTY Full/TTY + Talk/TTY + Hear
	Received missed call
	Battery strength. When the battery charge is low, is displayed

In case of emergency key

Getting in touch with those you call most is now as EZ as 1-2-3.

note: The following direction is an example with assigning Contact 1. The usage of Contact 2 and Contact 3 key will be same as the following.

To assign an existing contact

1. Press .
2. Select one of **Contact 1**, **Contact 2** or **Contact 3**.
3. Press **ASSIGN** > **From Contacts**.
4. Select a contact > **OK**.

To assign a new contact

1. Press .
2. Select one of **Contact 1**, **Contact 2** or **Contact 3**.
3. Press **ASSIGN** > **Add Contact**.
4. Enter the information in the fields and press **SAVE**.

To call using one touch key

1. Press .
2. Select the name > **View** > **Call**.

To reassign contact

1. Press .
2. Select the name > **ASSIGN**.
3. Select **From Contacts** or **Add Contact**.
   The steps are as same as 'To assign existing contact' or 'To assign a new contact'.

Entering text

You can enter standard, predictive, numeric or symbol text.

Useful keys

0 next	Press to view the next matching word in predictive mode
# ⇧	Add space
* +key	Press to change Capital mode. Press to change between abc Abc ABC, and press and hold to change from standard to predictive to numeric *Standard* abc Abc ABC (all small caps / first letter caps / all caps) *Predictive* word Word WORD (all small caps / first letter caps / all caps) *Number* 123

Key characters by language

Each of the following keys will scroll through these sequential options listed by language.

key	English	Spanish
1	. @ ? ! - , & : ‘ / 1	
2	a b c 2	a á b c 2
3	d e f 3	d e é f 3
4	g h i 4	g h i Í 4
5	j k l 5	
6	m n o 6	m n ñ o ó 6
7	p q r s 7	
8	t u v 8	t u ú v 8
9	w x y z 9	
0	0	

Predictive mode (Word)

The Predictive mode automatically compares your keystrokes with an internal linguistic dictionary to determine the correct word. The most commonly used word will appear first. To use Word mode, press **Abc** > **Word**.

1. Press and hold (*) to change the mode to **Word**.
2. Press (2 ABC) to (9 WXYZ) to input text. For example, to enter ‘hello’ press (4 GHI) (3 DEF) (5 JKL) (5 JKL) (6 MNO).

Alphabet input mode

Press the key labeled with the target letter once for the first letter; press it twice for the second letter, and so on.

1. Press and hold (*) to change the mode to **Abc**.
2. Press (2 ABC) to (9 WXYZ) to input text repeatedly. To enter the letter “C”, press (2 ABC) 3 times. To input number 2 press (2 ABC) four times.

Numeric mode

You can input numbers in this mode.

1. Press and hold (*) to change the mode to **123**.
2. Press (1) to (9 WXYZ) and (0 NEXT) to input numbers.

Symbol mode

You can input symbols.

1. Press **Abc** > **Symbols** to change the mode to symbols.
2. Select the symbols using ◀/▶/▲/▼.

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2

Calls & address book

Making, receiving and ending a call
Options during a call
Checking all calls
Speed dialing
Call setting
Using address book
Caller identification
Voice Command (VR)
Setting VR settings
Using your headset

Making, receiving and ending a call

Making a call

1. Enter the area code and phone number.
2. Press SEND.

Answering a call

1. Press SEND.

Ending a call

1. Press END.

Once the call is completed, a call summary is displayed.

Rejecting a call

1. Press END or **Ignore**.

Making a call using call list

Your phone logs up to 90 dialed, received and missed call numbers.

1. Press SEND to display the **All Calls** list.
2. Select **All Calls**, **Missed Calls**, **Received Calls**, or **Dialed Calls** by pressing the ◀/▶.
3. Select a number.
4. Press SEND to dial the selected number.

note: To redial the last number in the Recent Calls list, press SEND.

Making a call during a call

1. Enter the phone number.
2. Press SEND to dial the second call. The first call is automatically put on hold.

Switching between two calls

1. Press SEND.

Making an international call

1. Press and hold * key for the international prefix until the '+' character appears.
2. Type the country code, area code, and phone number.
3. Press SEND.

Making a 911 emergency call

1. Press 911 key and select **Yes**.
2. Or, press ICE Key and press SEND.

note: To set the location emergency number, press Menu > Settings > Advanced > Location.

Replying to a missed call

1. Press **View** to display the list of missed calls.
2. Select a number to call by pressing the ◀/▶.
3. Press SEND.

Answering a second call

1. Press SEND. The first call is automatically put on hold.
2. Press END to end all calls.

Options during a call

Microphone off and on

Switching your phone's microphone off

1. Press **Mute**.

Switching your phone's microphone back on

1. Press **Unmute**.

Talking on speaker

1. Press the speaker to turn on the speaker. To turn off the speaker, press the speaker again.

Putting a call on hold and return

Putting a call on hold

1. Press SEND.

Returning to a held call

1. Press SEND again.

Adding a pause / wait

Pauses are used for automated systems (i.e., voice mail or calling cards). Insert a pause after a phone number and then enter another group of numbers. The second set of numbers is dialed automatically after the pause. This feature is useful for dialing into systems that require a code.

Adding pause

1. Enter the phone number.
2. Press **Options** > **Add 2-Sec Pause**. The phone waits 2 seconds before sending the next string of digits automatically.

Adding wait

1. Enter the phone number.
2. Press **Options** > **Add Wait**. The phone stops dialing until you press the SEND to advance the next number.

3-way calling

You can talk up to 2 person or conference call.

Making 3-way call

1. Call the first participant.

2. Call the second participant. The first call is automatically put on hold.
3. When the second party is connected, press SEND again.

note: If one of the people you called hangs up during your call, you and the remaining caller will disconnected.

Searching a number in address book during a call

1. Press **Options** > **Contact List**.

Searching for a name or group in address book

Enter the first letters of the name for Name Search. The entries are displayed starting with the first entry matching your input.

Finding a name manually in address book

1. Press the ▲/▼ key.

Viewing the details of highlighted entry in address book

1. Press **VIEW**.

*For details on **address book**, see page **22**.*

Reading a message during a call

1. Press **Options** > **Main Menu** > **Messaging**.
2. Press **Inbox** > select a message > **VIEW**.

Writing a message during a call

1. Press **Options** > **New Message**.
2. Select **Text Message** or **Picture Message**.

*For details on **creating a text message**, see page **29**.*

note: During the call, you can only send text messages. Picture messages cannot be sent.

Checking all calls

You can view information about all **Recent Calls**. Press SEND to view all **Recent Calls**.

Viewing all calls

1. Press **Menu** > **Recent Calls** > **All Calls**.

Viewing missed calls

1. Press **Menu** > **Recent Calls** > **Missed Calls**.

Viewing dialed calls

1. Press **Menu** > **Recent Calls** > **Dialed Calls**.

Viewing received calls

1. Press **Menu** > **Recent Calls** > **Received Calls**.

Viewing blocked calls

1. Press **Menu** > **Recent Calls** > **Blocked Calls**.

Viewing call time

1. Press Menu > Recent Calls > Call Timers.
2. Press ▲/▼ to view Last Call, All Calls, Received Calls, Dialed Calls, Roaming Calls, Last Reset and Lifetime Calls.

Resetting all call times

1. Press Menu > Recent Calls > Call Timers.
2. Press Reset All > Yes.

Speed dialing

You can dial quickly using speed dialing. Up to 98 phone numbers can be programmed using numbers 2 to 99.

1 : Voicemail

Setting speed dial

1. Press Menu > Contacts > Speed Dials.
2. Select an empty entry and press ASSIGN.
3. Select a person and press OK > Yes.

Changing speed dialing person

1. Press Menu > Contacts > Speed Dials.
2. Select an assigned entry and press ASSIGN > Yes.
3. Select a person and press OK.

Removing from speed dial

1. Press Menu > Contacts > Speed Dials.
2. Select an assigned entry and press Remove > Yes.

Call setting

Setting answering options

1. Press Menu > Settings > Call Settings.
2. Press Answer Options.
3. Select Flip Open, Any Key or Auto Answer.
4. Press Mark > Done.

note: you can answer with any key except END and Ignore.

Setting speed dialing

1. Press Menu > Settings > Call Settings.
2. Press Speed Dial Call.
3. Select On or Off.
4. Press OK.

Setting auto redial

1. Press Menu > Settings > Call Settings.
2. Press Auto Retry.
3. Select 10 Seconds, 30 Seconds, 60 Seconds or Off.
4. Press OK.

Using address book

You can save names, phone numbers, and information on the phone.

Adding a contact

1. Press **Menu** > **Contacts** > **Add Contact**.
2. Enter the information in the fields.
3. Press **SAVE**.

Viewing contact list

1. Press **Menu** > **Contacts** > **Contact List**.

Searching for a phone number

1. Press **Menu** > **Contacts** > **Contact List**.
2. Input the first letter or two of the person's name and scroll with ▲/▼.
3. Press **VIEW** to view detail information.
4. To update information press **EDIT**.

Calling from contact list

1. Press **Menu** > **Contacts** > **Contact List**.
2. Select a person to call.
3. Press SEND.

Sending message from contact list

1. Press **Menu** > **Contacts** > **Contact List**.
2. Select a contact > **Options** > **Send Message**.
3. Select **Text Message** or **Picture Message**.
4. Enter the message > **SEND**.

Deleting a contact

1. Press **Menu** > **Contacts** > **Contact List**.
2. Select a contact > **Options** > **Erase Contact**.

Making a groups

1. Press **Menu** > **Contacts** > **Groups**.
2. There are two default groups : **Family**, **Work**.
3. To add new group, press **New**.
4. Enter new group name > **SAVE**.
5. To erase a group, press **Options** > **Erase Group**.

Adding members to a group

1. Press **Menu** > **Contacts** > **Groups**.
2. Select a group > **Add**.
3. Select the contact > **MARK** > **Done**.

note: To add more contacts after a contact is added to a group, select a group > Options > Add.

Sending a group message

1. Press **Menu** > **Contacts** > **Groups**.
2. Select a group > **Options** > **Send Message**.
3. Select **Text Message** or **Picture Message**.
4. Enter the message > **SEND**.

Caller identification

Caller identification

Caller ID displays the number of the person calling when your phone rings. If the caller's identity is stored in Contacts, the name appears on the screen. The caller ID is stored in the **Recent Calls**.

Voice Command (VR)

Your phone is equipped with VR (Voice Recognition) feature. This feature allows you to make calls or use the phone's functions by simply using your voice.
All you have to do is talk into the phone, and the phone will recognize your voice and complete tasks by itself.

Using VR (Voice Recognition)

1. Press .
2. The phone displays the Command menu and prompts you to say the name of the command you want to use. To complete your task, simply follow the voice prompts. You can say the name of the command after you hear a beep.

Tutorial

1. Press **Tutorial**. Tutorial will provide you with additional information on using voice recognition.

Call <Name or #>

1. Say **Call <Name>**. Your phone will ask you to confirm the name you said. Say "Yes", if it was repeated correctly. The person's phone number will be dialed. If there is more than one number saved for contact, you will be asked to confirm which number to dial.

Send text <Name or #>

1. Say **Send Text <Name>**.
   (Examples: - Send Text Tom Smith)

*For details on **creating a text message**, see page **29**.*

Send picture <Name or #>

1. Say **Send Picture <Name>**.
   (Examples: - Send Picture Tom Smith)

*For details on **creating a text message**, see page **29**.*

Lookup <Name>

1. Say **Lookup <Name>**.
   (Examples: - Lookup Tom Jones)
2. The **View Contact** page will be displayed for the contact name.

Go to <Menu>

1. Say **Go To** followed immediately by one of the items: (**Add Contact**, **Alarm Clock**, **Calculator**, **Calendar**, **Call Settings**, **Contacts**, **Contacts List**, **Display Settings**, **easy**edge[sm], **Messaging**, **Messaging Inbox**, **Media Gallery**, **Notepad**, **Picture Gallery**, **Phone Settings**, **Phone Info**, **Recent Calls**, **Settings**, **Stop Watch**, **Sound Gallery**, **Sound Settings**, **Tip Calculator**, **Tone Room**, **Tools**, **Voicemail**, **Voice Memo**, **Wizard**, or **World Clock**)

Check <Item>

1. Say **Check** followed immediately by one of the items: (**Status**, **Voicemail**, **Messages**, **Missed Calls**, **Time**, **Signal Strength**, **Network**, **Battery Level**, **My Phone Number** or **Volume**)

Setting VR settings

Setting VR confirmation

You can control whether the system asks you to confirm a name or number.

1. Press **Settings** > **Confirmation**.
2. Select **Automatic**, **Always Confirm** or **Never Confirm** > **OK**.

Setting VR adaptation

1. Press **Settings** > **Adaptation** > **Adapt Voice**.
2. Press **OK**.

Setting VR modes

Use modes to set the level of audio assistance.

1. Press **Settings** > **Audio Modes**.
2. Select **Expert Mode**, **Prompt Mode** or **Readout Mode** > **OK**.

Setting VR speakerphone

You can control the speakerphone behavior when voice recognition is started.

1. Press **Settings** > **Speakerphone**.
2. Select **Automatic**, **Always On** or **Always Off** > **OK**.

Setting VR about

1. Press **Settings** > **About**.
2. The VSuite version appears.

Using your headset

You can send or receive a call using your headset.
When you connect your headset to the jack the button on the headset works as follows.

note: You need to use the headset designed for this device and it is optional item. Also not every headset has a button.

To dial a call

While the phone is closed

1. Press the headset button once to display the last call.
2. Press the button twice to redial the last call.

While the phone is opened

1. Press the button once to list recent calls.
2. Press the button twice to redial the last call.

To receive a call

1. Press the button once to receive a call.
2. Press the button once to end the call.

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Messaging

Messaging
Receiving messages
Creating and sending text messages
Creating a picture message
Message template
Message settings

Messaging

You can send, receive and save the text message and picture message.

Deleting a message

1. Press **Menu** > **Messaging** > **Inbox**.
2. Select a message > **Options** > **Erase** > **Yes**.

Replying to a message

1. Press **Menu** > **Messaging** > **Inbox**.
2. Select a message > **VIEW** > **REPLY**.

Receiving messages

Viewing a new message

1. Press **View Now**.

Reading a message from the inbox

1. Press **Menu** > **Messaging** > **Inbox**.
2. Select a received message > **VIEW**.
3. To reply, press > **REPLY**.

Saving number or e-mail from received message

1. Press **Menu** > **Messaging** > **Inbox**.
2. Select a received message > **VIEW**.
3. Using ▲/▼, move the underline cursor to the number or email address that you want to save.
4. Press **Save**.
5. Select **Add New Contact** or select **Update Existing**.
6. Edit contact information > **OK**.

Saving the object in the received picture message

1. Press **Menu** > **Messaging** > **Inbox**.
2. Open the picture message.
3. Select an object > **Options**.
4. Select **Saved Picture**, **Save Sound**, **Save As Ringtone**, **Save As Phrase** or **Save Name Card**.

It will be saved in one of the categories in the **Picture Gallery** or **Sound Gallery** folder.

*For details on **photo album**, see page **35**.*

Listening to voice messages

1. Press and hold 1 or press **Menu** > **Messaging** > **Voicemail**. It will automatically call the voicemail center.

Creating and sending text messages

Sending new text message

1. Press **Menu** > **Messaging** > **Create Message** > **Text Message**.
2. Enter the phone number or press **Options** > **Add From Contacts**.
3. Select the contact > **MARK** > **Done**.
4. Press **NEXT** to enter the message.
5. Enter the message > **SEND**.

note: All send messages will save in Sent.

Finding all sent messages

1. Press **Menu** > **Messaging** > **Sent**.

Creating a picture message

You can create new picture message. Capacity is 1Mb and will alert you once that is exceeded via error message.

Adding saved picture to the message

1. Press **Menu** > **Messaging** > **Create Message** > **Picture Message**.
2. Enter the phone number or press **Options** > **Add From Contacts**.
3. Select the contact > **MARK** > **Done**.
4. Press **NEXT** to enter the message.
5. Enter the subject and message.
6. Press ▼ to attach **Picture**, **Sound** or **Name Card**.
7. Press **Add** > select the file to attach > **SEND** or **OK**.
8. To preview the message, press **Options** > **Preview**.

Message template

When you often use the same phrases, you can save the message under template messages.

Adding the existing template

1. Press **Menu** > **Messaging** > **Create Message** > **Text Message** or **Picture Message**.
2. Press **NEXT**.
3. Press **Options** > **Add Phrase**.
4. Select the sentence > **SELECT**.

Adding new template

1. Press **Menu** > **Messaging** > **Settings** > **Phrase**.
2. Press **Options** > **Add New**.
3. Enter the new phrase > **SAVE**.

Editing the existing template

1. Press **Menu** > **Messaging** > **Settings** > **Phrase**.
2. Select the sentence > **Edit**.
3. Edit sentence > **SAVE**.

Message settings

Setting for default editing mode

1. Press **Menu** > **Messaging** > **Settings** > **Entry Mode**.
2. Select **Word**, **Abc**, **ABC** or **123** > **OK**.

Setting to save sent message

1. Press **Menu** > **Messaging** > **Settings** > **Auto Save Sent**.
2. Select **On**, **Off** or **Prompt** > **OK**.

Setting to automatically erase message

1. Press **Menu** > **Messaging** > **Settings** >**Auto Erase**.
2. Select **On** or **Off** > **OK**.

Setting for callback number

1. Press **Menu** > **Messaging** > **Settings** > **Callback #**.
2. Select **On** or **Off** > **OK**.

Setting for a signature

1. Press **Menu** > **Messaging** > **Settings** > **Signature**.
2. Select **On** or **Off** > **OK**.

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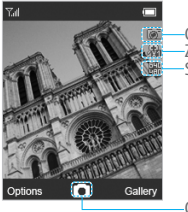
4

Multimedia

Camera
Photo album
Sound album

Camera

You can take pictures using the built-in camera. The photo clips can be saved and sent via picture message.



Setting camera settings

1. Press [camera] in Standby mode or press **Menu** > **Media Gallery** > **Camera**.
2. Press **Options** to change settings prior to taking a picture.

In options menu for camera

Name	Description
Image Size	1280x960(), 640x480(), 320x240()
Image Quality	Low, Medium, High

Icons for camera

Icon	Name	Description
	Capture Mode	
	Zoom	640x480: x1, x2 320x240: x1, x2, x4

note: Zoom tool is disabled when the picture size set for 1280x960.

Zoom in and out

1. Press ◀ / ▶.

Taking a picture

1. Press [camera] in Standby mode or press **Menu** > **Media Gallery** > **Camera**.
2. Focus on the object > **OK**.
3. To save, press **SAVE**.
4. To view the taken picture, press **Gallery**.

note: Your photo will be saved automatically to Media Gallery > Picture Gallery.

Viewing the taken picture

1. Press **Menu** > **Media Gallery** > **Picture Gallery**.
2. Select the picture > **VIEW**.

After taking pictures

To	Press
Send a picture message	Options > Send as Picture MSG
Set as wallpaper	Options > Set As > Wallpaper
Set as picture identification	Options > Set As > Picture ID
View taken picture	Options > Go to Picture Gallery

Photo album

You can view, send, save and delete photos. JPEG, GIF, Animated-GIF, BMP, WBMP, BCI, SVG and PNG formats are supported.

Viewing the saved pictures

1. Press Menu > Media Gallery > Picture Gallery.
2. Select a picture > VIEW.

Setting as wallpaper in the display

1. Press Menu > Media Gallery > Picture Gallery.
2. Select a picture > Options > Set As > Wallpaper.

Sending pictures using picture message

1. Press Menu > Media Gallery > Picture Gallery.
2. Select a picture > Send > Picture Message.

*For details on **creating a picture message**, see page **29**.*

Sound album

You can listen to all received attached sound and music files. MP3, PMD and SP-MIDI formats are supported.

Listening to sound files

1. Press Menu > Media Gallery > Sound Gallery.
2. Select a sound > PLAY.
3. To stop playing, press STOP.

Setting as ringtone

1. Press Menu > Media Gallery > Sound Gallery.
2. Select a sound > Set As > Ringtone.

Setting as contact's ringtone

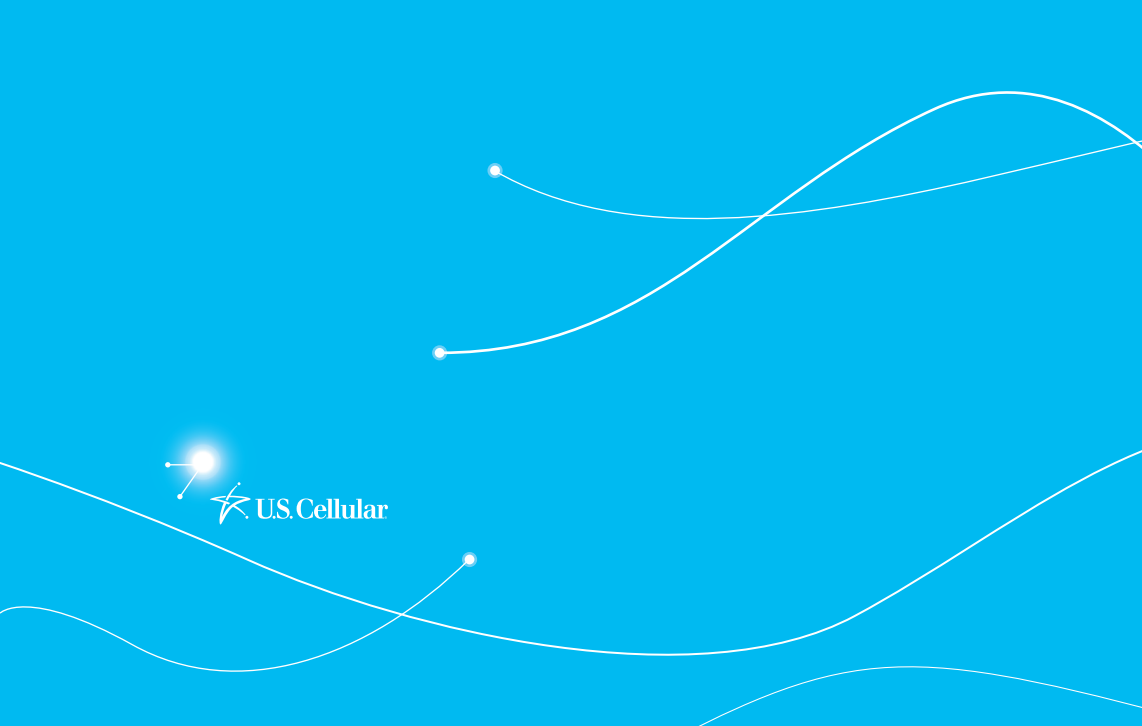
1. Press Menu > Media Gallery > Sound Gallery.
2. Select a sound > Set As > Contact ID.
3. Select a contact > OK.

Setting as alert

1. Press Menu > Media Gallery > Sound Gallery.
2. Select a sound > Set As > Alert Sounds.

Viewing the sound information

1. Press Menu > Media Gallery > Sound Gallery.
2. Select a sound > Options > File Info.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5

Useful Features

Alarm
Calculator and tip calculator
Calendar
Voice memo and notepad
Stopwatch
Help balloon
Clear hearing

Alarm

Setting an alarm

1. Press **Menu** > **Tools** > **Alarm Clock**.
2. Select **Alarm1**, **Alarm2** or **Alarm3** > **EDIT**.
3. Select **On** or **Off** using ▶/◀.
4. Set the time
5. Select **Once**, **Daily**, **Mon-Fri** or **Weekends** using ▶/◀.
6. Press Set > select the sound > **OK** > **SAVE**.

note: You can only set 3 alarms.

Viewing the saved alarms

1. Press **Menu** > **Tools** >**Alarm Clock**.

Editing existing alarms

1. Press **Menu** > **Tools** > **Alarm Clock**.
2. Select an alarm > **EDIT**.
3. Edit the alarm settings.
4. To reset an alarm > **Options** > **Reset**.

Calculator and tip calculator

Using the calculator

1. Press ▼ in standby mode or press **Menu** > **Tools** > **Calculator**.
2. Enter the numbers and press ▲/▼/◀/▶, **OK** to calculate.
3. To clear, press **Clear**.
4. Press * to use the decimal point.
5. Press # to use plus or minus.

note: To use open or close parenthesis, press Operator.

Using tip calculator

1. Press **Menu** > **Tools** > **Tip Calculator**.
2. Enter values for all variable fields (**Total Bill($)**, **Tip(%)**, **Split**) and the corresponding calculation fields (**Tip($)**, **Total($)**) are updated automatically.
3. Press **Reset** to reset.

Calendar

Calendar helps you manage your schedule including your time for calls or special days. You can set a reminder on any given date with this function.

Viewing calendar

1. Press ◀ in standby mode or press **Menu** > **Tools** > **Calendar**.

note: Monthly view is displayed as default.

In the monthly view

To	Press
Move to another day	◀ for Previous ▶ for Next
Move to another week	▲ for Previous ▼ for Next

Creating a new event

1. Press ◀ in standby mode or press Menu > Tools > Calendar.
2. Select a day > Add.
3. Enter information at the fields > SAVE.

note: You can create up to 30 scheduled events.

Editing an event

1. Press ◀ in standby mode or press Menu > Tools > Calendar.
2. Select a day > VIEW > VIEW > EDIT.
3. Enter new information at the fields > SAVE.

Erasing an event

1. Press ◀ in standby mode or press Menu > Tools > Calendar.
2. Select a day > VIEW > Erase > Yes.

Voice memo and notepad

Recording voice memo

1. Press Menu > Tools > Voice Memo.
2. Press New Record.
3. Press OK for new recording.
4. Press STOP to stop recording.

Listening the recorded sound

1. Press Menu > Tools > Voice Memo.
2. Select a sound > PLAY.
3. To pause, press PAUSE.

Using notepad

1. Press Menu > Tools > Notepad.
2. Press New.
3. Enter the memo > SAVE.
4. To edit memo press VIEW > EDIT.
5. To save, press SAVE.
6. To erase, press Options > Erase.

Stopwatch

Using stopwatch

1. Press **Menu** > **Tools** > **Stop Watch**.
2. Press **START** to start.
3. To stop, press **STOP**.
4. To record lap time, press **Cont**.
5. Press **Record** > **Reset** to clear.

Help balloon

Using help balloon

1. Press **Menu** > **Wizard** > **Help Balloon**.
2. Select **Always On**, **OK Key Use** or **Off**.
3. Press **OK**.

Clear hearing

Using slow speech

When activated, the Slow Speech option slows down the speech speed of the person you're speaking with so you listen easier. To activate Slow Speech.

1. Press **Menu** > **Wizard** > **Clear Hearing**.
2. Press **Slow Speech**.
3. Select **Always On**, **AVR Key Use** or **Off**.
4. Press **OK**.

Using noise suppressor

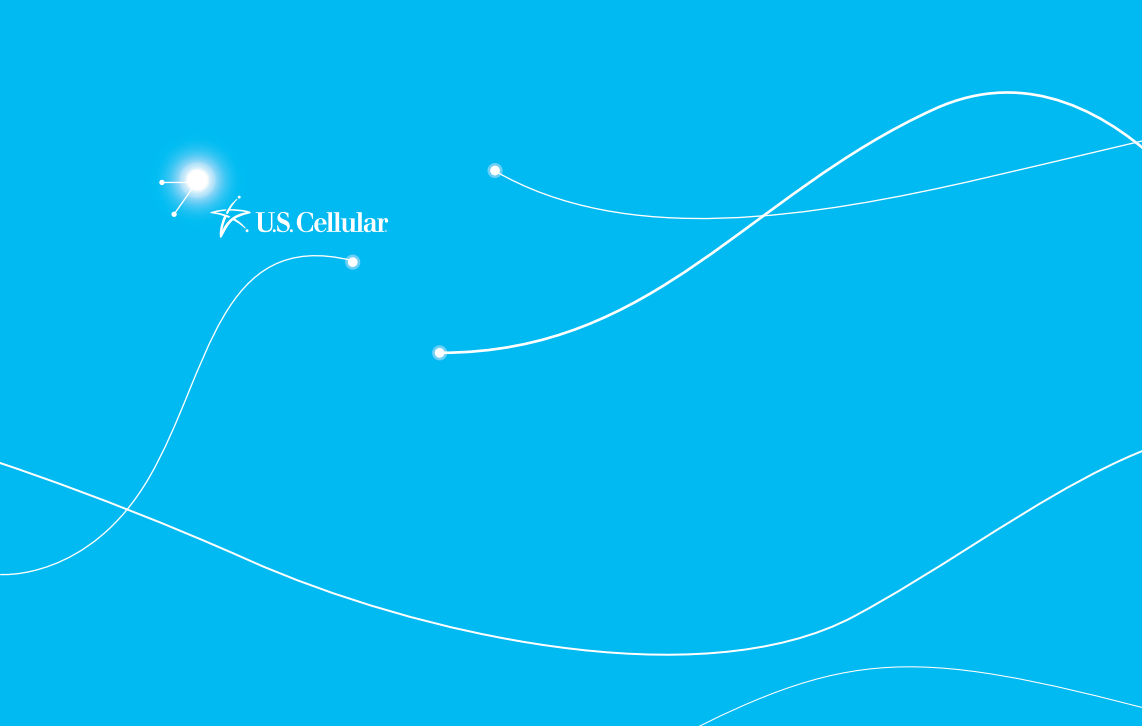
When activated, the Noise Suppressor option greatly reduces background noise and improves call quality in loud situations. To activate Noise Suppressor

1. Press **Menu** > **Wizard** > **Clear Hearing**.
2. Press **Noise Suppressor**.
3. Select **On** or **Off**.
4. Press **OK**.

Using pitch adjustment

Pitch Adjustment allows you to adjust the pitch of the caller's voice so their speech tones sound higher than normal. To access Pitch Adjustment

1. Press **Menu** > **Wizard** > **Clear Hearing**.
2. Press **Pitch Adjustment**.
3. Select **High**, **Low** or **Off**.
4. Press **OK**.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Settings

Ringtones and alert
Display
Language
Locks
Information

Ringtones and alert

Setting ringtones

1. Press Menu > Settings >Sound Settings.
2. Press Ringtone.
3. Select the ringtone > OK.

Downloading ringtones

1. Press Menu > Tone Room > Launching Tone Room.

Setting alert for message

1. Press Menu > Settings > Sound Settings.
2. Press Message Alert.
3. Select the alert > OK.

Setting alert for missed calls

1. Press Menu > Settings > Sound Settings.
2. Press Missed Call.
3. Select Once, Every 2 Minutes, Every 15 Minutes or Off > OK.

Display

Setting the wallpaper

1. Press Menu > Settings > Display Settings.
2. Press Wallpaper.
3. Select the file > OK.

Setting menu layout

1. Press Menu > Settings > Display Settings.
2. Press Menu Layout.
3. Select List or Grid.
4. Press OK.

Setting time for display backlight

1. Press Menu > Settings > Display Settings.
2. Press Backlight > Display.
3. Select the time > OK.

note: Modifying backlight time may affect battery life.

Setting time for keypad backlight

1. Press Menu > Settings > Display Settings.
2. Press Backlight > Keypad.
3. Select the time > OK.

Language

Setting up

1. Press Menu > Settings > Advanced > Language.

2. Select the language > **OK**.

Locks

Locking the phone

1. Press **Menu** > **Settings** > **Advanced** > **Security**.
2. Enter the password.
3. Press **Lock Phone Now** > **OK**.

note: The default password is the last 4 digits of my number. To change the password press Menu > Settings > Advanced > Security > Edit Codes.

Setting the phone lock

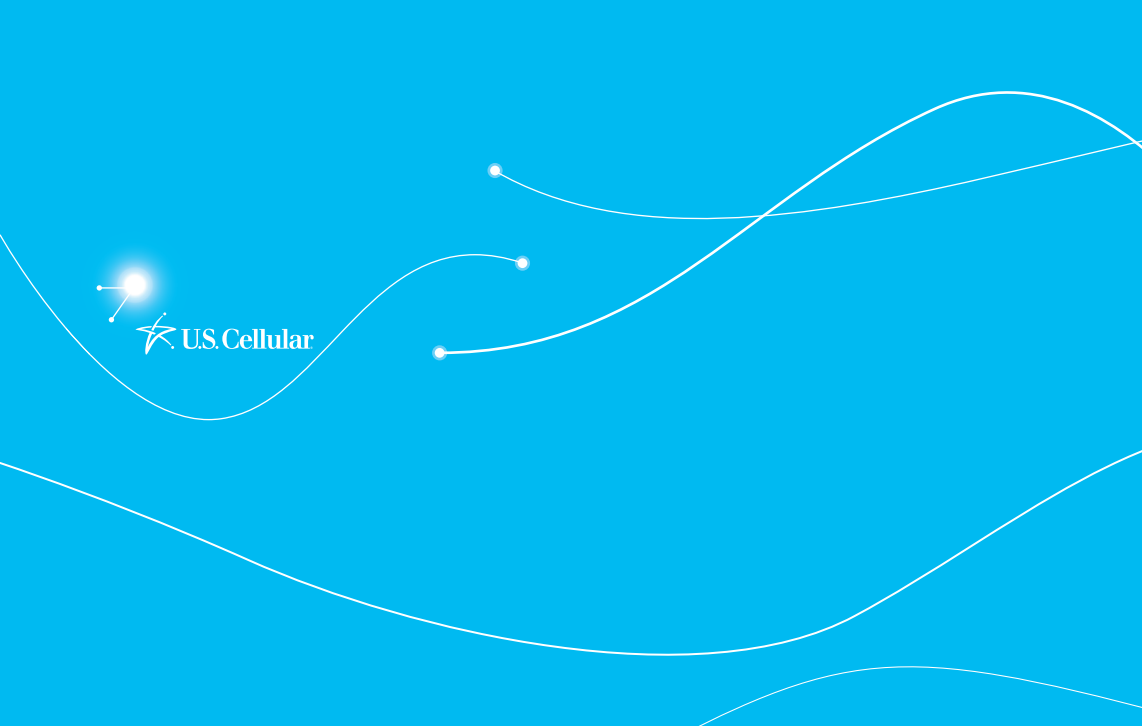
The Personal Identification Number is the security code that protects the phone against unauthorized use.

1. Press **Menu** > **Settings** > **Advanced** > **Security**.
2. Enter the password.
3. Press **Phone Lock Setting**.
4. Select **Unlocked** or **On Power Up** > **OK**.

Information

Viewing phone information

1. Press **Menu** > **Settings** > **Phone Info**.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Appendix

Safety information for wireless handheld phones
Other safety guidelines
About the battery usage
Safety information for FCC RF exposure
SAR information
Hearing aid compatibility (HAC) for Wireless Telecommunications devices
FDA Consumer update
Avoid potential hearing loss
FCC compliance information
12 Month Limited Warranty

Safety information for wireless handheld phones

Read this information before using your handheld portable cellular telephone

Exposure to radio frequency signals

Your wireless handheld portable telephone is a low power radio transmitter and receiver. When it is ON, it receives and also sends out radio frequency (RF) signals. In August 1996, the Federal Communications Commissions (FCC) adopted RF exposure guidelines with safety levels for handheld wireless phones. Those guidelines are consistent with the safety standards previously set by both U.S. and international standards bodies:

ANSI C95.1 (1992) *
NCRP Report 86 (1986) *
ICNIRP (1996) *

Those standards were based on comprehensive and periodic evaluations of the relevant scientific literature. For example, over 120 scientists, engineers, and physicians from universities, government health agencies, and industry reviewed the available body of research to develop the ANSI Standard (C951).
The design of your phone complies with the FCC guidelines (and those standards).

1*: American National Standards Institute.
2*: National Council on Radiation protection and measurements.
3*: International Commission on Nonionizing Radiation Protection.

Antenna safety

Use only the supplied or an approved replacement antenna. Unauthorized antennas, modifications, or attachments could impair call quality, damage the phone, or result in violation of FCC regulations. Please contact your local dealer for replacement antenna.
Do not use the phone with a damaged antenna. If a damaged antenna comes into contact with the skin, a minor burn may result. Please contact your local dealer for replacement antenna.

Driving safety

Talking on the phone while driving is extremely dangerous and is illegal in some states. Remember, safety comes first. Check the laws and regulations on the use of phones in the areas where you drive. Always obey them.
Also, if using your phone while driving, please:

- Give full attention to driving. Driving safely is your first responsibility.
- Use hands-free operation, if available.
- Pull off the road and park before making or answering a call, if driving conditions so require.

If you must use the phone while driving, please use one-touch, speed dialing, and auto answer modes.

An airbag inflates with great force. DO NOT place objects, including both installed or portable wireless equipment, in the area over the airbag or in the air bag deployment area. If in-vehicle wireless equipment is improperly installed and the air bag inflates, serious injury could result. **WARNING**: Failure to follow these instructions may lead to serious personal injury and possible property damage.

Electronic devices

Your wireless handheld portable telephone is a low power radio transmitter and receiver. When it is ON, it receives and also sends out radio frequency (RF) signals. Most modern electronic equipment is shielded from RF energy. However, certain electronic equipment may not be shielded against the RF signals from your wireless phone. Therefore, use of your phone must be restricted in certain situations.

Pacemakers

The Health Industry Manufacturers Association recommends that a minimum separation of six (6") inches be maintained between a handheld wireless phone and a pacemaker to avoid potential interference with the pacemaker. These recommendations are consistent with the independent research by and recommendations of Wireless Technology Research. Persons with pacemakers:

- ALWAYS keep the phone more than six inches from your pacemaker when the phone is turned on.
- Do not carry the phone in a breast pocket.
- Use the ear opposite the pacemaker to minimize the potential for interference.
- If you have any reason to suspect that interference is taking place, turn your phone OFF immediately.

Hearing aids

Some digital wireless phones may interfere with some hearing aids. In the event of such interference, you may want to consult your service provider (or call the customer service line to discuss alternatives).

Other medical devices

If you use any other personal medical device, consult the manufacturer of your device to determine if they are adequately shielded from external RF energy.
Your physician may be able to assist you in obtaining this information. Turn your phone OFF in healthcare facilities when any regulations posted in these areas instruct you to do so. Hospitals or healthcare facilities may be using equipment that could be sensitive to external RF energy.

Vehicles

RF signals may affect improperly installed or inadequately shielded electronic systems in motor vehicles. Check with the manufacturer or its representative regarding your vehicle. You should also consult the manufacturer of any equipment that has been added to your vehicle.

Posted facilities

Turn your phone OFF where posted notices so require.

Other safety guidelines

Aircraft

FCC regulations prohibit using your phone while in the air. Turn your phone OFF before boarding an aircraft. Always request and obtain prior consent and approval of an authorized airline representative before using your phone aboard an aircraft.
Always follow the instructions of the airline representative whenever using your phone aboard an aircraft, to prevent any possible interference with airborne electronic equipment.

Blasting areas

To avoid interfering with blasting operations, turn your phone OFF when in a "blasting area" or in areas posted: "Turn off two-way radio." Obey all signs and instructions.

Potentially explosive atmospheres

Turn your phone OFF when in any area with a potentially explosive atmosphere and obey all signs and instructions. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death. Areas with a potentially explosive atmosphere are often, but not always, clearly marked. They include fueling areas such as gas stations; below deck on boats; fuel or chemical transfer or storage facilities; vehicles using liquefied petroleum gas (such as propane or butane); areas where the air contains chemicals or particles, such as grain, dust, or metal powders; and any other area where you would normally be advised to turn off your vehicle's engine.

Precautions

Your Handheld Portable Telephone is a high quality piece of equipment. Before operating, read all instructions and cautionary markings on (1) AC/DC Travel Adaptor (2) Battery and (3) Product Using Battery.
Failure to follow the directions below could result in serious bodily injury and/or property damage due to battery liquid leakage, fire or rupture.

- DO NOT use this equipment in an extreme environment where high temperature or high humidity exists.
- DO NOT abuse the equipment. Avoid striking, shaking or shocking. When not using, lay down the unit to avoid possible damage due to instability.
- DO NOT expose this equipment to rain or spilled beverages.
- DO NOT use unauthorized accessories.
- DO NOT disassemble the phone or its accessories. If service or repair is required, return unit to an authorized PCD cellular service center. If unit is disassembled, the risk of electric shock or fire may result.
- DO NOT short-circuit the battery terminals with metal items etc.

About the battery usage

Your phone is powered by a Lithium Ion (Li-Ion) battery. This means that, unlike other forms of battery technology, you can recharge your battery while some charge remains without reducing your phone's autonomy due to the "battery memory effect" inherent in those technologies.

- Do not use a damaged battery or charger.
- Do not disassemble or open crush, bend or deform, puncture or shred.
- Do not modify or remanufacture, attempt to insert foreign objects into the battery, immerse or expose to water or other liquids, expose to fire, explosion or other hazard.
- Do not put your battery into contact with conductive objects.
- Dispose of and recycle used batteries in accordance with local regulations. Do not dispose of batteries by burning; they may explode.
- Do not use an unauthorized charger.
- Only use the battery for the device for which it is specified.
- Only use the battery with a charging device that has been qualified with the device per this standard. Use of an unqualified battery or charger may present a risk of fire, explosion, leakage, or other hazard.
- Do not short circuit a battery or allow metallic conductive objects to contact battery terminals.
- Promptly dispose of used batteries in accordance with local regulations
- Battery usage by children should be supervised.
- Avoid dropping the phone or battery. If the phone or battery is dropped, especially on a hard surface, and the user suspects damage, take it to a service center for inspection.
- Use your battery for the specified purpose only.
- The closer you are to your network's base station, the longer your phone usage time because less battery power is consumed for the connection.
- The battery recharging time varies depending on the remaining battery capacity and the battery and charger type you use.
- Battery life inevitably shortens over time.
- Use an authorized battery and charger only.
- Since overcharging may shorten battery life, remove the phone from its charger once it is fully charged. Unplug the charger, once charging is complete. Leaving the battery in hot or cold places, especially inside a car in summer or winter, may reduce the capacity and life of the battery. Always keep the battery within normal temperatures.
- To prevent injury or burns, ensure that no metal objects come into contact with the + and – terminals of the battery.

Safety information for FCC RF exposure

WARNING! READ THIS INFORMATION BEFORE USING

Cautions

In August 1996 the Federal Communications Commission (FCC) of the United States with its action in Report and Order FCC 96-326 adopted an updated safety standard for human exposure to radio frequency electromagnetic energy emitted by FCC regulated transmitters. Those

guidelines are consistent with the safety standard previously set by both U.S. and international standards bodies. The design of this phone complies with the FCC guidelines and these international standards.

Body-worn operation

This device was tested for typical body-worn operations with the back of the phone kept 1.5 cm. from the body. To maintain compliance requirements, use only belt-clips, holsters or similar accessories that maintain a 1.5 cm separation distance between the user's Body and the back of the phone, including the antenna.
The use of belt-clips, holsters and similar accessories should not contain metallic components in its assembly. The use of accessories that do not satisfy these requirements may not comply with FCC RF exposure requirements, and should be avoided.
note: For more information about RF exposure, please visit the FCC website at www.fcc.gov.

SAR information

This model phone meets the government's requirements for exposure to radio waves.

Your wireless phone is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to radiofrequency (RF) energy set by the Federal Communications Commission of the U.S. Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.
The exposure standard for wireless mobile phones employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6 W/kg. * Tests for SAR are conducted with the phone transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the phone while operating can be well below the maximum value. This is because the phone is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output.
Before a phone model is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government adopted requirement for safe exposure. The tests are performed in positions and locations (e.g., at the ear and worn on the body) as required by the FCC for each model. The highest SAR value for this model phone when tested for use at the ear is 1.39 W/Kg and when worn on the body, as described in this user guide, is 0.779 W/Kg. (Body-worn measurements differ among phone models, depending upon available

accessories and FCC requirements). While there may be differences between the SAR levels of various phones and at various positions, they all meet the government requirement for safe exposure.
The SAR testing for Body-worn operation was performed with a belt clip that provided a 22mm separation. The User's Manual indicates that any holsters/clips used with this device should contain no metallic components.
The FCC has granted an Equipment Authorization for this model phone with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines.
SAR information on this model phone is on file with the FCC and can be found under the Display Grant section of **http://www.fcc.gov/oet/ea** after searching on PP4COACH.
Additional information on Specific Absorption Rates (SAR) can be found on the Cellular Telecommunications Industry Association (CTIA) web-site at **http://www.wow-com.com**

* In the United States and Canada, the SAR limit for mobile phones used by the public is 1.6 watts/kg (W/kg) averaged over one gram of tissue. The standard incorporates a sub-stantial margin of safety to give additional protection for the public and to account for any variations in measurements.

Hearing aid compatibility (HAC) for Wireless Telecommunications devices

PCD's commitment

PCD believes that all of our customers should be able to enjoy the benefits of digital wireless technologies. We are committed to providing a selection of compatible devices for our customers who wear hearing aids.
THIS PHONE HAS A HAC RATING OF M4/T4

What is hearing aid compatibility?

The Federal Communications Commission has implemented rules and a rating system designed to enable people who wear hearing aids to more effectively use these wireless telecommunications devices. The standard for compatibility of digital wireless phones with hearing aids is set forth in American National Standard Institute (ANSI) standard C63.19. There are two sets of ANSI standards with ratings from one to four (four being the best rating): an "M" rating for reduced interference making it easier to hear conversations on the phone when using the hearing aid microphone, and a "T" rating that enables the phone to be used with hearing aids operating in the telecoil mode thus reducing unwanted background noise.

How will I know which wireless phones are hearing aid compatible?

The Hearing Aid Compatibility rating is displayed on the

wireless phone box.

A phone is considered Hearing Aid Compatible for acoustic coupling (microphone mode) if it has an "M3" or "M4" rating. A digital wireless phone is considered Hearing Aid Compatible for inductive coupling (telecoil mode) if it has a "T3" or "T4" rating.

How will I know if my hearing aid will work with a particular digital wireless phone?

You'll want to try a number of wireless phones so that you can decide which works the best with your hearing aids. You may also want to talk with your hearing aid professional about the extent to which your hearing aids are immune to interference, if they have wireless phone shielding, and whether your hearing aid has a HAC rating.

For more information about hearing aids and digital wireless phone

- FCC Hearing Aid Compatibility and Volume Control – **http://www.fcc.gov/cgb/dro/hearing.html**
- Hearing Loss Association of America – **http://www.hearingloss.org/learn/cellphonetech.asp**
- CTIA – **http://www.accesswireless.org/hearingaid/**
- Gallaudet University, RERC – **http://tap.gallaudet.edu/voice**

FDA Consumer update

U.S. Food and drug administration - center for devices and radiological health consumer update on wireless phones

1. Do wireless phones pose a health hazard?

The available scientific evidence does not show that any health problems are associated with using wireless phones. There is no proof, however, that wireless phones are absolutely safe. Wireless phones emit low levels of radiofrequency energy (RF) in the microwave range while being used. They also emit very low levels of RF when in the stand-by mode. Whereas high levels of RF can produce health effects (by heating tissue), exposure to low level RF that does not produce heating effects causes no known adverse health effects. Many studies of low level RF exposures have not found any biological effects. Some studies have suggested that some biological effects may occur, but such findings have not been confirmed by additional research. In some cases, other researchers have had difficulty in reproducing those studies, or in determining the reasons for inconsistent results.

2. What is FDA's role concerning the safety of wireless phones?

Under the law, FDA does not review the safety of radiation-emitting consumer products such as wireless phones before they can be sold,

as it does with new drugs or medical devices. However, the agency has authority to take action if wireless phones are shown to emit radiofrequency energy (RF) at a level that is hazardous to the user. In such a case, FDA could require the manufacturers of wireless phones to notify users of the health hazard and to repair, replace or recall the phones so that the hazard no longer exists. Although the existing scientific data do not justify FDA regulatory actions, FDA has urged the wireless phone industry to take a number of steps, including the following:

- Support needed research into possible biological effects of RF of the type emitted by wireless phones;
- Design wireless phones in a way that minimizes any RF exposure to the user that is not necessary for device function;

and

- Cooperate in providing users of wireless phones with the best possible information on possible effects of wireless phone use on human health. FDA belongs to an interagency working group of the federal agencies that have responsibility for different aspects of RF safety to ensure coordinated efforts at the federal level. The following agencies belong to this working group:
- National Institute for Occupational Safety and Health
- Environmental Protection Agency
- Federal Communications Commission
- Occupational Safety and Health Administration
- National Telecommunications and Information Administration

The National Institutes of Health participates in some inter-agency working group activities, as well. FDA shares regulatory responsibilities for wireless phones with the Federal Communications Commission (FCC). All phones that are sold in the United States must comply with FCC safety guidelines that limit RF exposure. FCC relies on FDA and other health agencies for safety questions about wireless phones. FCC also regulates the base stations that the wireless phone networks rely upon. While these base stations operate at higher power than do the wireless phones themselves, the RF exposures that people get from these base stations are typically thousands of times lower than those they can get from wireless phones. Base stations are thus not the subject of the safety questions discussed in this document.

3. What kinds of phones are the subjects of this update?

The term "wireless phone" refers here to hand-held wireless phones with built-in antennas, often called "cell," "mobile," or "PCS" phones. These types of wireless phones can expose the user to measurable radiofrequency energy (RF) because of the short distance between the phone and the user's head. These RF exposures are limited by Federal Communications Commission safety guidelines that were developed with the advice of FDA and other federal health and safety agencies. When the phone is located at greater distances from the user, the exposure to RF is drastically lower because a person's RF exposure decreases rapidly with increasing distance from the source. The so-called "cordless phones," which have a

base unit connected to the telephone wiring in a house, typically operate at far lower power levels, and thus produce RF exposures far below the FCC safety limits.

4. What are the results of the research done already?

The research done thus far has produced conflicting results, and many studies have suffered from flaws in their research methods. Animal experiments investigating the effects of radiofrequency energy (RF) exposures characteristic of wireless phones have yielded conflicting results that often cannot be repeated in other laboratories.

A few animal studies, however, have suggested that low levels of RF could accelerate the development of cancer in laboratory animals.

However, many of the studies that showed increased tumor development used animals that had been genetically engineered or treated with cancer-causing chemicals so as to be predisposed to develop cancer in the absence of RF exposure.

Other studies exposed the animals to RF for up to 22 hours per day. These conditions are not similar to the conditions under which people use wireless phones, so we don't know with certainty what the results of such studies mean for human health.

Three large epidemiology studies have been published since December 2000. Between them, the studies investigated any possible association between the use of wireless phones and primary brain cancer, glioma, meningioma, or acoustic neu-roma, tumors of the brain or salivary gland, leukemia, or other cancers. None of the studies demonstrated the existence of any harmful health effects from wireless phone RF exposures. However, none of the studies can answer questions about long-term exposures, since the average period of phone use in these studies was around three years.

5. What research is needed to decide whether RF exposure from wireless phones poses a health risk?

A combination of laboratory studies and epidemiological studies of people actually using wireless phones would provide some of the data that are needed. Lifetime animal exposure studies could be completed in a few years. However, very large numbers of animals would be needed to provide reliable proof of a cancer promoting effect if one exists. Epidemiological studies can provide data that is directly applicable to human populations, but 10 or more years' follow-up may be needed to provide answers about some health effects, such as cancer. This is because the interval between the time of exposure to a cancer-causing agent and the time tumors develop - if they do -may be many, many years. The interpretation of epidemiological studies is hampered by difficulties in measuring actual RF exposure during day-to-day use of wireless phones. Many factors affect this measurement, such as the angle at which the phone is held, or which model of phone is used.

6. What is FDA doing to find out more about the possible health effects of wireless phone RF?

FDA is working with the U.S. National Toxicology Program and with groups of investigators around the world to ensure that high priority

animal studies are conducted to address important questions about the effects of exposure to radiofrequency energy (RF). FDA has been a leading participant in the World Health Organization International Electromagnetic Fields (EMF) Project since its inception in 1996. An influential result of this work has been the development of a detailed agenda of research needs that has driven the establishment of new research programs around the world. The Project has also helped develop a series of public information documents on EMF issues. FDA and the Cellular Telecommunications & Internet Association (CTIA) have a formal Cooperative Research and Development Agreement (CRADA) to do research on wireless phone safety. FDA provides the scientific oversight, obtaining input from experts in government, industry, and academic organizations. CTIA-funded research is conducted through contracts to independent investigators. The initial research will include both laboratory studies and studies of wireless phone users. The CRADA will also include a broad assessment of additional research needs in the context of the latest research developments around the world.

7. How can I find out how much radiofrequency energy exposure I can get by using my wireless phone?

All phones sold in the United States must comply with Federal Communications Commission (FCC) guidelines that limit radiofrequency energy (RF) exposures. FCC established these guidelines in consultation with FDA and the other federal health and safety agencies. The FCC limit for RF exposure from wireless telephones is set at a Specific Absorption Rate (SAR) of 1.6 watts per kilogram (1.6 W/kg). The FCC limit is consistent with the safety standards developed by the Institute of Electrical and Electronic Engineering (IEEE) and the National Council on Radiation Protection and Measurement. The exposure limit takes into consideration the body's ability to remove heat from the tissues that absorb energy from the wireless phone and is set well below levels known to have effects. Manufacturers of wireless phones must report the RF exposure level for each model of phone to the FCC. The FCC website (**http://www.fcc.gov/oet/rfsafety**) gives directions for locating the FCC identification number on your phone so you can find your phone's RF exposure level in the online listing.

8. What has FDA done to measure the radiofrequency energy coming from wireless phones?

The Institute of Electrical and Electronic Engineers (IEEE) is developing a technical standard for measuring the radiofrequency energy (RF) exposure from wireless phones and other wireless handsets with the participation and leadership of FDA scientists and engineers. The standard, "Recommended Practice for Determining the Spatial-Peak Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques," sets forth the first consistent test methodology for measuring the rate at which RF is deposited in the heads of wireless phone users. The test method uses a tissue-simulating model of the human head. Standardized SAR test methodology is expected to greatly improve the consistency of measurements made at different laboratories on the same phone. SAR is

the measurement of the amount of energy absorbed in tissue, either by the whole body or a small part of the body. It is measured in watts/kg (or milliwatts/g) of matter. This measurement is used to determine whether a wireless phone complies with safety guidelines.

9. What steps can I take to reduce my exposure to radiofrequency energy from my wireless phone?

If there is a risk from these products - and at this point we do not know that there is - it is probably very small. But if you are concerned about avoiding even potential risks, you can take a few simple steps to minimize your exposure to radiofrequency energy (RF). Since time is a key factor in how much exposure a person receives, reducing the amount of time spent using a wireless phone will reduce RF exposure. If you must conduct extended conversations by wireless phone every day, you could place more distance between your body and the source of the RF, since the exposure level drops off dramatically with distance.

For example, you could use a headset and carry the wireless phone away from your body or use a wireless phone connected to a remote antenna. Again, the scientific data do not demonstrate that wireless phones are harmful. But if you are concerned about the RF exposure from these products, you can use measures like those described above to reduce your RF exposure from wireless phone use.

10. What about children using wireless phones?

The scientific evidence does not show a danger to users of wireless phones, including children and teenagers. If you want to take steps to lower exposure to radiofrequency energy (RF), the measures described above would apply to children and teenagers using wireless phones. Reducing the time of wireless phone use and increasing the distance between the user and the RF source will reduce RF exposure.

Some groups sponsored by other national governments have advised that children be discouraged from using wireless phones at all. For example, the government in the United Kingdom distributed leaflets containing such a recommendation in December 2000. They noted that no evidence exists that using a wireless phone causes brain tumors or other ill effects. Their recommendation to limit wireless phone use by children was strictly precautionary; it was not based on scientific evidence that any health hazard exists.

11. What about wireless phone interference with medical equipment?

Radiofrequency energy (RF) from wireless phones can interact with some electronic devices. For this reason, FDA helped develop a detailed test method to measure electromagnetic interference (EMI) of implanted cardiac pacemakers and defibrillators from wireless telephones. This test method is now part of a standard sponsored by the Association for the Advancement of Medical instrumentation (AAMI). The final draft, a joint effort by FDA, medical device manufacturers, and many other groups, was completed in late 2000. This standard will allow manufacturers to ensure that cardiac pacemakers and defibrillators are safe from wireless

phone EMI. FDA has tested hearing aids for interference from handheld wireless phones and helped develop a voluntary standard sponsored by the Institute of Electrical and Electronic Engineers (IEEE). This standard specifies test methods and performance requirements for hearing aids and wireless phones so that that no interference occurs when a person uses a "compatible" phone and a "compatible" hearing aid at the same time. This standard was approved by the IEEE in 2000. FDA continues to monitor the use of wireless phones for possible interactions with other medical devices. Should harmful interference be found to occur, FDA will conduct testing to assess the interference and work to resolve the problem.

12. Where can I find additional information?

For additional information, please refer to the following resources:

- FDA web page on wireless phones (**http://www.fda.gov/Radiation-EmittingProducts/RadiationEmittingProductsandProcedures/HomeBusinessandEntertainment/CellPhones/default.htm**)
- Federal Communications Commission (FCC) RF Safety Program (**http://www.fcc.gov/oet/rfsafety**)
- International Commission on Non-Ionizing Radiation Protection (**http://www.icnirp.de**)
- World Health Organization (WHO) International EMF Project (**http://www.who.int/emf**)
- Health Protection Agency (UK) (**http://www.hpa.org.uk/radiation/**)

Avoid potential hearing loss

Prolonged exposure to loud sounds (including music) is the most common cause of preventable hearing loss. Some scientific research suggests that using portable audio devices, such as portable music players and cellular telephones, at high volume settings for long durations may lead to permanent noise-induced hearing loss. This includes the use of headphones (including headsets, ear-buds and Bluetooth® or other wireless devices). Exposure to very loud sound has also been associated in some studies with tinnitus (a ringing in the ear), hypersensitivity to sound and distorted hearing. Individual susceptibility to noise-induced hearing loss and other potential hearing problems varies.

The amount of sound produced by a portable audio device varies depending on the nature of the sound, the device, the device settings and the headphones. You should follow some commonsense recommendations when using any portable audio device:

- Set the volume in a quiet environment and select the lowest volume at which you can hear adequately.
- When using headphones, turn the volume down if you cannot hear the people speaking near you or if the person sitting next to you can hear what you are listening to.
- Do not turn the volume up to block out noisy surroundings. If you choose to listen to your portable device in a noisy environment, use noise-cancelling headphones to block out background environmental noise.
- Limit the amount of time you listen. As the volume increases, less time is

required before your hearing could be affected.

- Avoid using headphones after exposure to extremely loud noises, such as rock concerts, that might cause temporary hearing loss. Temporary hearing loss might cause unsafe volumes to sound normal.
- Do not listen at any volume that causes you discomfort. If you experience ringing in your ears, hear muffled speech or experience any temporary hearing difficulty after listening to your portable audio device, discontinue use and consult your doctor.

You can obtain additional information on this subject from the following sources:

American Academy of Audiology

11730 Plaza America Drive, Suite 300
Reston, VA 20190
Voice: 800-AAA-2336
Email: infoaud@audiology.org
Internet: **www.audiology.org**

National Institute on Deafness and Other Communication Disorders
National Institutes of Health
31 Center Drive, MSC 2320
Bethesda, MD USA 20892-2320
Voice: (301) 496-7243
Email: nidcdinfo@nidcd.nih.gov
Internet: **http://www.nidcd.nih.gov/health/hearing**

National Institute for Occupational Safety and Health
1600 Clifton Rd
Atlanta, GA 30333
Voice: 1-800-CDC-INFO (1-800-232-4636)
Internet: **http://www.cdc.gov/niosh/topics/noise/default.html**

FCC compliance information

This device complies with Part 15 of FCC Rules.
Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received.
Including interference that may cause undesired operation.

Information to the user

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful Interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if Not installed and used in accordance with the instructions, may cause harmful Interference to radio communications. However, there is no guarantee that interference will not occur in a particular Installation. If this equipment does cause harmful interference

to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
  Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet of a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for assistance.

CAUTION: Changes or modification not expressly approved by the party responsible for Compliance could void the user's authority to operate the equipment. Connecting of peripherals requires the use of grounded shielded signal cables.

12 Month Limited Warranty

Personal Communications Devices, LLC. (the "Company") warrants to the original retail purchaser of this handheld portable cellular telephone, that should this product or any part thereof during normal consumer usage and conditions, be proven defective in material or workmanship that results in product failure within the first twelve (12) month period from the date of purchase, such defect(s) will be repaired or replaced (with new or rebuilt parts) at the Company's option, without charge for parts or labor directly related to the defect(s).

The antenna, keypad, display, rechargeable battery and battery charger, if included, are similarly warranted for twelve (12) months from date of purchase.

This Warranty extends only to consumers who purchase the product in the United States or Canada and it is not transferable or assignable.

This Warranty does not apply to:

(a) Product subjected to abnormal use or conditions, accident, mishandling, neglect, unauthorized alteration, misuse, improper installation or repair or improper storage;

(b) Product whose mechanical serial number or electronic serial number has been removed, altered or defaced.

(c) Damage from exposure to moisture, humidity, excessive temperatures or extreme environmental conditions;

(d) Damage resulting from connection to, or use of any accessory or other product not approved or authorized by the Company;

(e) Defects in appearance, cosmetic, decorative or structural items such as framing and non-operative parts;

(f) Product damaged from external causes such as fire, flooding, dirt, sand, weather conditions, battery leakage, blown fuse, theft or improper usage of any electrical source.

The Company disclaims liability for removal or reinstallation of the product, for geographic coverage, for inadequate signal reception by the antenna or for communications range or operation of the cellular system as a whole.

When sending your wireless device to Personal Communications Devices for repair or service, please note that any personal data or software stored

on the device may be inadvertently erased or altered. Therefore, we strongly recommend you make a back up copy of all data and software contained on your device before submitting it for repair or service. This includes all contact lists, downloads (i.e. third-party software applications, ringtones, games and graphics) and any other data added to your device. In addition, if your wireless device utilizes a SIM or Multimedia card, please remove the card before submitting the device and store for later use when your device is returned, Personal Communications Devices is not responsible for and does not guarantee restoration of any third-party software, personal information or memory data contained in, stored on, or integrated with any wireless device, whether under warranty or not, returned to Personal Communications Devices for repair or service.
To obtain repairs or replacement within the terms of this Warranty, the product should be delivered with proof of Warranty coverage (e.g. dated bill of sale), the consumer's return address, daytime phone number and/or fax number and complete description of the problem, transportation prepaid, to the Company at the address shown below or to the place of purchase for repair or replacement processing. In addition, for reference to an authorized Warranty station in your area, you may telephone in the United States (800) 229-1235, and in Canada (800) 465-9672 (in Ontario call 416-695-3060).

THE EXTENT OF THE COMPANY'S LIABILITY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT PROVIDED ABOVE AND, IN NO EVENT, SHALL THE COMPANY'S LIAIBILITY EXCEED THE PURCHASE PRICE PAID BY PURCHASER FOR THE PRODUCT.
ANY IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, SHALL BE LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. ANY ACTION FOR BREACH OF ANY WARRANTY MUST BE BROUGHT WITHIN A PERIOD OF 18 MONTHS FROM DATE OF ORIGINAL PURCHASE. IN NO CASE SHALL THE COMPANY BE LIABLE FOR AN SPECIAL CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, WHATSOEVER. THE COMPANY SHALL NOT BE LIABLE FOR THE DELAY IN RENDERING SERVICE UNDER THIS WARRANTY OR LOSS OF USE DURING THE TIME THE PRODUCT IS BEING REPAIRED OR REPLACED.

No person or representative is authorized to assume for the Company any liability other than expressed herein in connection with the sale of this product.
Some states or provinces do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damage so the above limitation or exclusions may not apply to you. This Warranty gives you specific legal rights, and you may also have other rights, which vary from state to state or province to province.

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